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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,353	07/30/2001	Kamel Ayadi	12885-003001	5775

26161 7590 02/12/2004

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EXAMINER

NGUYEN, KHIEM M

ART UNIT PAPER NUMBER

2839

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,353

Applicant(s)

AYADI, KAMEL

Examiner

Khiem Nguyen

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-20, 23-31 and 34-37 is/are rejected.
- 7) ☒ Claim(s) 9-10, 21-22, 32-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 11-20, 23-31, 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art in view of Chun et al. (5,521,992).

The APA integrated circuit (IC) design disclosed in the background of the present invention lacks the claimed multi-sided module having a cavity housing a substrate provided with n photoreceivers located on a side of the substrate adapted to receive a beam of collimated light.

Chun discloses module like substrate 400 with cavity for receiving and housing a substrate 408 provided with n photoreceivers (non-numbered) located on optical surface 409 (see also figure 5 embodiment).

Therefore, it would have obvious for one of ordinary skilled in the art at the time of the present invention to provide a multi-sided module with a cavity for housing a substrate with IC provided with n photoreceivers located on a side of the substrate of

Art Unit:

the APA in view of the teachings of Chun et al. The molding of optical components in the IC substrate would result in a more precise and compact system as disclosed by Chun et al.

Regarding the different beams of collimated light as laser packet, pulses or network light is deemed a matter of routine experimentation, optimum ranges and use of preferred product (In re Aller, 105 USPQ 233. CCPA 1955).

Therefore, it would have been obvious for one of ordinary skill in the art to use the different types of collimated light beams (laser packet, pulses or network) for the prior art optical system for achieving the required design constraints.

Regarding the use of n transistors for converting the n laser light pulses to n electronic pulses, n receivers for converting the n electronic pulses to a digitized packet and the use of n latches for storing said digitized packet are old and well known in the art. An example in the use of electronic latches for storing a digital data from processed optical signal is disclosed in Smith et al.

Allowable Subject Matter

3. Claims 9-10, 21-22, 32, 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: The use of a laser controller in combination with the claimed optical module of the instant invention for receiving a series of k electronic pulses from the multiplexer; and a laser light source receiving an input from the laser controller and sending a second laser light packet having a second set of k light pulses to the network, wherein k=n is not being disclosed in the prior art.

Response to Arguments

1. Applicant's arguments filed with the remarks have been fully considered but they are not persuasive.

Regarding applicant's remarks that Fujimura et al is not proper prior art since its effective filing date is after that of the instant invention. Upon further considerations, examiner agree and withdraw the Fujimura et al. as prior art. However, examiner disagrees with applicant's argument that the sole art rejection, which relies on Fujimura is improper and should be withdrawn. It is noted that the office action also relies on Chun et al., and applicant has not provided any argument or remark with respect to Chun et al. which is now considered as the proper secondary reference in the rejection.

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khiem Nguyen whose telephone number is 571 272-2096. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571 272-2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2839

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Khiem Nguyen
Primary Examiner
Art Unit 2839